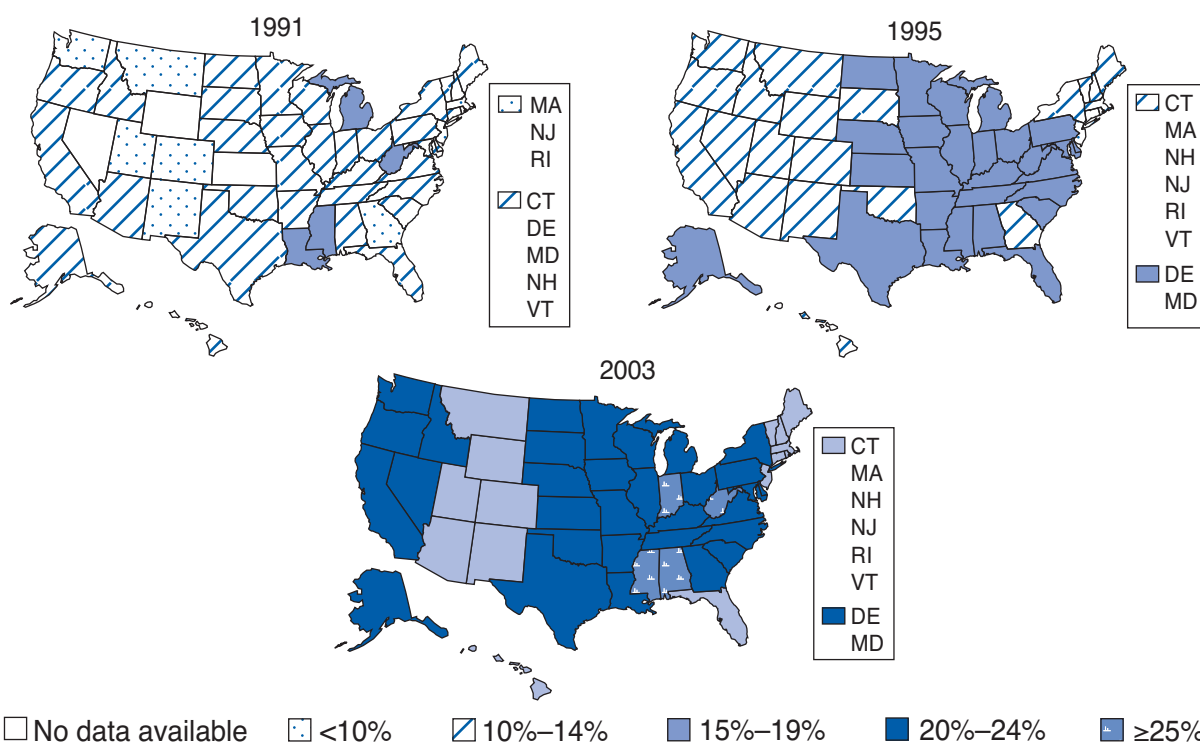


# Physical Activity and Good Nutrition

## Essential Elements to Prevent Chronic Diseases and Obesity 2005

### Percentage of Adults Who Are Obese,\* by State



\* Body mass index >30 or about 30 lbs overweight for a 5' 4" person.  
Source: CDC, Behavioral Risk Factor Surveillance System.

*“As a society, we can no longer afford to make poor health choices such as being physically inactive and eating an unhealthy diet; these choices have led to a tremendous obesity epidemic. As policy makers and health professionals, we must embrace small steps toward coordinated policy and environmental changes that will help Americans live longer, better, healthier lives.”*

Vice Admiral Richard H. Carmona, MD, MPH, FACS  
U.S. Surgeon General

# The Importance of Physical Activity and Good Nutrition

Chronic diseases accounted for 5 of the leading 6 causes of disease in 2002 in the United States. In addition, the prolonged illness and disability associated with many chronic diseases decrease the quality of life for millions of Americans.

Much of the chronic disease burden is preventable. Physical inactivity and unhealthy eating contribute to obesity and a number of chronic diseases, including cancer, cardiovascular disease, and diabetes.

## The Obesity Epidemic

Following dramatic increases in overweight and obesity among U.S. adults between 1976–1980 and 1999–2002, obesity has reached epidemic proportions—30% of adults are obese. Moreover, the epidemic is not limited to adults. The percentage of young people who are overweight has more than doubled in the last 20 years. Among children and adolescents aged 6–19 years, 16% are considered overweight.

People who are obese are at increased risk for heart disease, high blood pressure, diabetes, arthritis-related disabilities, and some cancers. The estimated annual cost of obesity in the United States in 2000 was about \$117 billion.

Promoting regular physical activity and healthy eating and creating an environment that supports these behaviors are essential to reducing this epidemic of obesity.

## Lack of Physical Activity

Regular physical activity reduces people's risk for heart attack, colon cancer, diabetes, and high blood pressure and may reduce their risk for stroke. It also helps to control weight; contributes to healthy bones, muscles, and joints; reduces falls among older adults; helps to relieve the pain of arthritis; reduces symptoms of anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications. Moreover, physical activity need not be strenuous to be beneficial; people of all ages benefit from moderate-intensity physical activity, such as 30 minutes of brisk walking five or more times a week.

Despite the proven benefits of physical activity, more than 50% of U.S. adults do not get enough physical activity to provide health benefits: 26% are not active at all in their leisure time. Activity decreases with age, and sufficient activity is less common among women than men and among those with lower incomes and less education.

Insufficient physical activity is not limited to adults. More than a third of young people in grades 9–12 do not regularly engage in vigorous physical activity. Daily participation

in high school physical education classes dropped from 42% in 1991 to 28% in 2003.

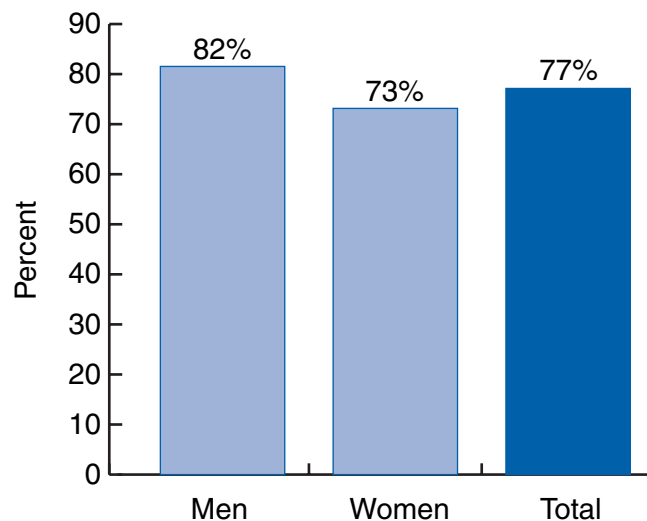
## The Critical Role of Healthy Eating

Research shows that good nutrition can help to lower people's risk for many chronic diseases, including heart disease, stroke, some cancers, diabetes, and osteoporosis. However, a large gap remains between recommended dietary patterns and what Americans actually eat. For example, in 2003, only about one-fourth of U.S. adults ate the recommended five or more servings of fruits and vegetables each day. In addition, in the last 30 years, calorie intake has increased for both men and women.

Poor eating habits are often established during childhood. In 2003, only 22% of young people ate the recommended five or more servings of fruits and vegetables each day.

To help people improve their eating habits, the U.S. Department of Health and Human Services (HHS) and the U.S. Department of Agriculture (USDA) publishes *Dietary Guidelines for Americans* every 5 years. The latest version was published in January 2005 and is available on the Internet at <http://www.healthierus.gov/dietaryguidelines>. These guidelines provide science-based advice to promote health and reduce risk for major chronic diseases through good nutrition and physical activity.

**Percentage of Adults Who Ate Fewer Than 5 Servings of Fruits and Vegetables Each Day, by Sex, 2003**



Source: CDC, Behavioral Risk Factor Surveillance System.

## CDC's National Leadership

CDC is committed to ensuring that all people achieve their optimal lifespan with the best possible quality of health in every stage of life. With a number of important new health impact goals, CDC is setting the agenda to enable the American people to enjoy a healthy life by delaying death and the onset of illness and disability. In addition, CDC works to eliminate disparities by accelerating improvements for those at the greatest risk of poor health.

With fiscal year 2004 funding of \$42 million, CDC's Division of Nutrition and Physical Activity worked to reduce chronic diseases through state programs, epidemiological and behavioral research, surveillance, training and education, intervention development and evaluation, health promotion and leadership, policy and environmental change, communication and social marketing, and partnership development.

From these resources, the Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases funded 28 states to target physical activity, poor nutrition, and obesity. Of these, 23 states were funded at the capacity building level to hire staff with expertise in public health nutrition and physical activity, build coalitions, develop state nutrition and physical activity plans, identify community resources and gaps, implement small-scale interventions, and work to raise public awareness of system changes needed to help residents achieve and maintain a healthy weight.

The other five states were funded at the basic implementation level to put into action the obesity prevention strategies identified in their state plans: conducting and evaluating nutrition and physical activity interventions, training health care providers and public health professionals, providing grants to communities for local obesity prevention initiatives, making environmental changes to encourage access to healthy foods and places to be active, and strengthening obesity prevention programs in community settings such as preschools, child care centers, work sites, and health care settings. In 2005, CDC will continue to support these states and will work to increase the number of states that receive basic implementation funding. All states will continue to evaluate strategies to determine their effectiveness and guide future efforts.

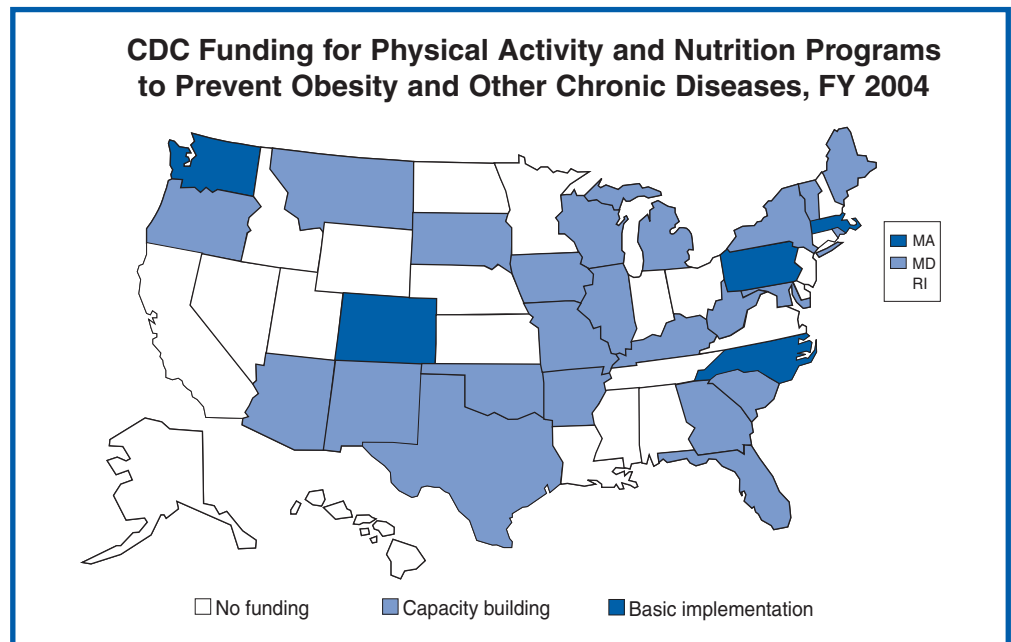
## Providing Training and Technical Assistance

CDC supports state health departments by providing consultation, technical assistance, and training to funded states. In December 2004, the Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases held its first evaluation workshop, titled Planning, Learning, and Sharing. The nearly 140 attendees learned how to evaluate nutrition, physical activity, and obesity prevention and control programs.

CDC is developing a Center of Excellence in Public Health Training and Intervention Research Translation that will support and complement the Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases and the WISEWOMAN screening and evaluation program. The center will train public health professionals and help translate research findings into effective programs.

## Improving Health Care Services

Medical settings offer ideal opportunities to promote good nutrition and physical activity. In recent years, CDC has worked with insurers, managed care organizations, and other federal agencies to improve health care services for obese patients. As a result, Kaiser Permanente® has explored new primary care approaches to addressing nutrition and physical activity behaviors related to overweight in children and adolescents. Following a request from CDC, the Centers for Medicare & Medicaid Services removed language in its regulations that stated that obesity was not an illness.



# Laying the Foundation for the Future

## Conducting Essential Research

CDC research continues to shed light on the role of physical activity and nutrition in health. For example,

- CDC will publish recommendations for preventing and controlling obesity in the *Guide to Community Preventive Services*. The recommendations are based on extensive evidence-based review of current research.
- CDC is examining the role of fruit and vegetable consumption and portion size in managing weight.
- CDC funded an economic study that found that direct medical costs related to overweight and obesity accounted for 9.1% of total U.S. medical expenditures in 1998, and that more than half of these costs were borne by Medicaid and Medicare.

## Promoting Healthy Lifestyles

Because obesity is caused by a complex and interrelated set of individual and community factors, state obesity prevention programs are implementing interventions that focus simultaneously on physical activity and nutrition among individuals and on related community and environmental issues. For example, the Massachusetts *5-2-1 Go!* program uses math, science, language arts, social studies, and physical education classes to teach middle school students to eat 5 servings of fruits and vegetables a day, watch TV less than 2 hours a day, and spend at least 1 hour a day being physically active.

## Monitoring Nutritional Status

Through its Pediatric Nutrition Surveillance System (PedNSS) and Pregnancy Nutrition Surveillance System (PNSS), CDC facilitates the collection, analysis, monitoring, and interpretation of key indicators of child nutritional status such as overweight and behavioral and nutritional risk factors for low-income pregnant women.

## Providing Growth Charts and Training

Correctly identifying weight problems among young people is essential to public health efforts to prevent obesity. The 2000 CDC Growth Charts include body mass index (a ratio of weight to height) by age charts for boys and girls aged 2–20 years. The charts and training modules on how to use them are available on the Internet at <http://www.cdc.gov/growthcharts>. The training modules meet continuing education criteria for physicians and nurses.

## State Programs in Action

The **Colorado** Work Site Resource Kit provides employers with resources to implement work site wellness initiatives. The kit shows employers how to plan, assess, and successfully implement physical activity and nutrition interventions. It explains the importance of each step and provides information on additional resources.

**Washington's** Access to Healthy Foods Coalition includes representatives from business, industry, agriculture, and public health who work together to increase residents' access to healthy foods. The coalition focuses on three areas: work sites, point-of-purchase areas (e.g., grocery stores, restaurants, vending machines), and food assistance programs. Programs include Snack Attack, which offers free fruits and vegetables to children in grocery stores, and an Internet database that connects food assistance programs with growers and produce suppliers.

## Promoting Work Site Health

CDC's Healthier Worksite Initiative (HWI) began in 2002 to lead federal agencies in implementing the *HealthierUS* initiative, which calls on public and private employers to encourage their employees to be physically active every day, eat a nutritious diet, get preventive screenings, and make healthy choices. CDC will disseminate evidence-based interventions and lessons learned to other federal, state, and private employers through an Internet-based tool kit. In fiscal year 2005, HWI will continue to develop and implement policy and environmental changes at CDC work sites that help people make healthy choices.

## Future Directions

CDC and its partners will continue to create, evaluate, and modify programs, policies, and practices to prevent and control obesity. CDC also will expand communication efforts to promote physical activity and good nutrition in work sites, schools, and health care settings. CDC will continue to support HHS's *Steps to a HealthierUS* initiative as it works with communities across the country on innovative strategies to promote physical activity and good nutrition.

For more information or additional copies of this document, please contact  
Centers for Disease Control and Prevention  
National Center for Chronic Disease Prevention and Health Promotion, Mail Stop K-46  
4770 Buford Highway NE, Atlanta, GA 30341-3717  
Telephone: (770) 488-5820 • Fax: (770) 488-6500  
E-mail: [ccdinfo@cdc.gov](mailto:ccdinfo@cdc.gov) • Web: <http://www.cdc.gov/nccdphp/dnpa>